

REMARKS

Claims 21 and 22 are amended to explicitly recite a ground connection between the radiotelephone and the modem circuit, and to correct the 35 U.S.C. § 112 deficiency noted by the Examiner.

The Examiner rejected claim 14 under 35 U.S.C. § 103 as being unpatentable over Hollenbach in combination with Lindell. Claim 14 is directed to a radiotelephone – including radio circuitry for radio frequency communication with a remote radio device. Hollenbach discloses a modem card. Abstract, Figs. 1-3, element 104. The modem card is alternatively connectable to the PSTN (Fig. 2) or a cellular telephone (Fig. 3). The sole disclosure of any detail about a cellular telephone in Hollenbach is the fact that the modem may be connected to one (see Fig. 3, “TO CELLULAR TELEPHONE”), and that the modem exchanges data with the cellular telephone via Tx and Rx lines. col. 5, lines 44-48, Fig. 3.

The Examiner stated that the recited limitation of claim 14, “radio circuitry for radio frequency communication with a remote radio device” is disclosed by Hollenbach’s modem. As well understood by those of skill in the art, a modem (MODulator/DEModulator) is a device that modulates digital data in audio signals for transmission over a telephonic channel, and demodulates received audio signals into digital data. The modulated data may be transmitted via wires in the PSTN, or wirelessly, such as by a cellular telephone. The modem itself includes no radio circuitry, and effects no radio frequency communication with any remote radio device. Hollenbach discloses modulated data transmitted to and from a cellular telephone by wires (col. 5, lines 44-48; Fig. 3, element 140), not by radio frequency communication.

The Examiner stated that the recited limitation, “a controller coupled to the radio circuitry for controlling operation of the radiotelephone” is inherent. Hollenbach does not disclose any radio circuitry; hence, a controller for it cannot be inherent. Furthermore, the cited passage, col. 6, lines 14-18, disclose only the routing of power to the CODEC or DAA 108 during a cellular telephone call via the loop-back in connector P1 on lines 146 and 148. Hollenbach is

completely silent – explicitly or by implication – as to any feature or operation of the attached cellular telephone.

Hollenbach does not disclose the claimed limitation, “a data circuit for communicating digital data with the detachable modem circuit.” This is a data circuit in a radiotelephone, and Hollenbach is completely silent as to any feature at all, much less communications interface circuits, in an attached cellular telephone. The cited passage, col. 5, lines 43-48 disclose the features of a connector P1 attached to the modem card when a cellular telephone is attached. The sole disclosure regarding the cellular telephone is that it communicates with the modem via a transmit and a receive line. The other cited passage, col. 6, lines 10-18, discloses how power is applied to the modem by an attached PC, via the loop-back connections 146, 148 in the connector P1. This discloses absolutely nothing about any data circuit in the attached cellular telephone for communicating digital data with the modem, as recited in claim 14.

As Hollenbach does not disclose any digital data communications circuit in a radiotelephone at all, it additionally fails to disclose “the data circuit being responsive to the supply voltage on the interface node for providing output digital signals to the modem circuit and receiving input digital signals from the modem circuit.” For “responsive to the supply voltage on the interface node,” the Examiner cited to “fig. 3 number 100.” The element numbered 100 in Fig. 3 is the entire modem card, including the modem 104, high voltage isolation 106, DAA/CODEC 108, input voltage line 128, input ground line 130, tip 132 and ring 134 lines from the PSTN connector S2, Rx 120 and Tx 122 lines from/to the cellular telephone, and loop-back input voltage 126 and ground 124 lines from the connector P1, as well as connectors S3, S1a, S1b and S2. It is impossible to ascertain what in “fig. 3 number 100” the Examiner asserts discloses a data circuit in a radiotelephone being responsive to a supply voltage on an interface node – which interface node the Examiner admits that Hollenbach does not disclose.

When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be

designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.”

37 CFR § 1.104(c)(2).

The passage from the specification of Hollenbach relied on as disclosing the above limitation – aside from being wholly unrelated to any data circuit in a cellular telephone – does not disclose providing output signals to a modem or receiving input signals from a modem “responsive to the supply voltage on the interface node,” as claimed. Again, the Examiner admitted that Hollenbach does not even disclose such an interface node. Col. 5, line 66 – col. 6, line 31 discloses only how power is applied to the DAA/CODEC 108 on the modem card – by the PC, loop-back through connector P1 when attached to the cellular telephone, and by the PSTN line power when attached to the PSTN, with isolation. This merely describes how power is applied to the DAA/CODEC 108, and does not disclose that the input or output signals are “responsive to the supply voltage on the interface node.”

Claim 14 further recites, “an interface circuit coupled to the interface node, the interface circuit configured to provide a supply voltage to match the output digital signals to logic voltages used by logic circuits of the modem circuit.” The interface circuit is a circuit in a radiotelephone; Hollenbach does not disclose any circuit in the attached cellular telephone. The Examiner cited to Fig. 3, element 108, which is a line powered DAA or CODEC. Hollenbach describes this circuit at col. 4, lines 64-67: “The communication card modem 100 includes a telephone line interface (TLI), data access arrangement (DAA), and/or codec 108 for interfacing directly to the PSTN or cellular telephone.” Why would a radiotelephone include a circuit “for interfacing directly to the PSTN or cellular telephone?” Element 108 is clearly an interface circuit that transforms data received on cellular telephone Tx/Rx lines, or PSTN Tip/Ring lines, to that required by the modem circuit 104.

The Examiner again cited broadly to Fig. 3, number 100 – i.e., the entire modem card – as disclosing the interface node that the Examiner admits Hollenbach does not disclose.

The Examiner cited to Lindell for disclosure of an interface node. Claim 14 recites, "an interface node for electrically connecting said radiotelephone to the supply voltage of a detachable modem circuit." Lindell discloses no such interface node. Col. 7, lines 40-62 disclose a memory unit 210 connected to a laptop computer 110. The cited passage discloses only a computer module connector 113 and a module connector 213. Nothing in the cited passage discloses that when mated, the connectors form an interface node electrically connecting a radiotelephone to the supply voltage of a detachable modem circuit. Col. 8, lines 36-62 disclose a modular telecommunications unit 220 connected to a laptop computer 120 having an integral antenna 124. A computer module connector 123 connects to a module connector 223, and a computer antenna connector 126 connects to a module antenna connector 226. Nothing in the cited passage discloses that when mated, the connectors form an interface node electrically connecting a radiotelephone to the supply voltage of a detachable modem circuit.

At col. 8, lines 51-61, Lindell discusses that in various embodiments, the battery may supply all the power needed by the telecommunications module 220, may supplement the power provided by the laptop computer 120, or may supplement the computer's power only when it is insufficient for the operation of the module 220. None of possibilities discloses an interface node in a radiotelephone for electrically connecting the radiotelephone to the supply voltage of a detachable modem circuit, and certainly do not disclose or suggest data communication circuits or an interface circuit operative to reference input and output communication signals to the voltage level on the interface node, or that of an attached modem.

As neither Hollenbach nor Lindell, separately or in combination, teach or suggest the limitations of claim 14, the claim, and all claims depending therefrom, define nonobviousness over the art of record. Applicant notes that, with the § 112 issue resolved, claims 12, 13, 21 and 22 are allowable. Therefore, prompt allowance of all pending claims is respectfully requested.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.

A handwritten signature in black ink, appearing to read "Edward H. Green, III", written over a horizontal line.

Edward H. Green, III  
Attorney for Applicants  
Registration No.: 42,604

Dated: February 28, 2005

P.O. Box 5  
Raleigh, NC 27602  
Telephone: (919) 854-1844